

Section 1-1: Points, Lines, and Planes

By the end of this lesson, you should be able to answer:

- How do you identify and model points, lines, and planes?
- How do you identify intersecting lines and planes?

Define the following:

1. Undefined Term

2. Point

3. Line

4. Plane

5. Collinear

6. Coplanar

7. Intersection

8. Definition

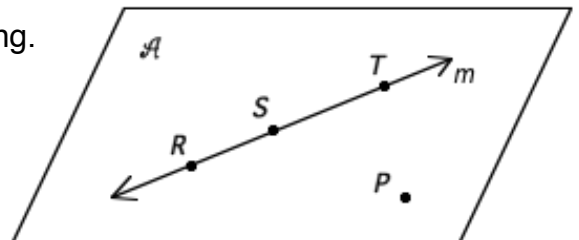
9. Defined Term

10. Space

Example 1: Use the figure to name each of the following.

a. A line containing point R

b. A plane containing point P



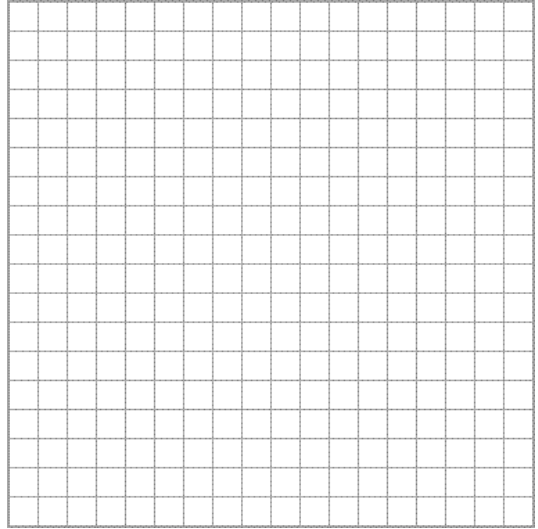
Example 2: Name the geometric shape modeled by each object.

a. A crack in a sidewalk

b. A drop of water on the sidewalk

Example 3: Draw and label plane T that contains lines \overleftrightarrow{UV} and \overleftrightarrow{WX} such that the lines intersect at point Z . Then, add a point H to plane T so that it is not collinear with \overleftrightarrow{UV} or \overleftrightarrow{WX} .

Example 4: Points $A(-3, 3)$ and $B(2, -5)$ form a line. Graph the points and line on the coordinate plane, then add a point C so that it is collinear with A and B .



Example 5: Answer the following.

a. How many points are needed to form a line?

b. How many points are needed to form a plane?

c. What is the intersection of two planes?

d. What is the intersection of two lines?

e. What is the difference between *collinear* and *coplanar*?

Problem Set:

"In terms of being late or not starting at all, then it's never too late."
- Alison Headley